

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: INVUE

Report Number: P401229

Luminaire Tested: **ENT-SA1B-830-U-T4FT-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401229
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-16)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-830-U-T4FT-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1929 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

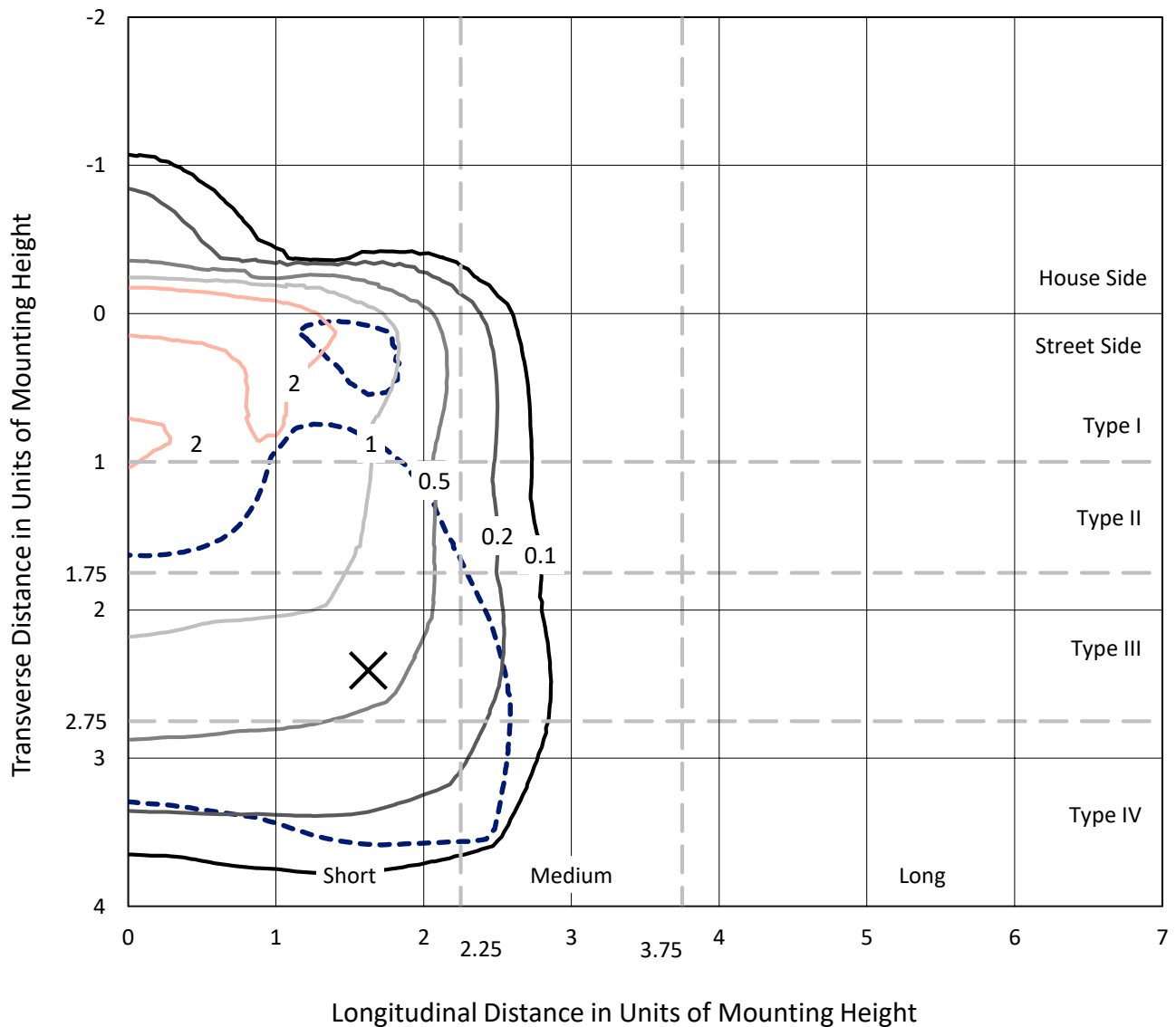
Input Watts (W): 25.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

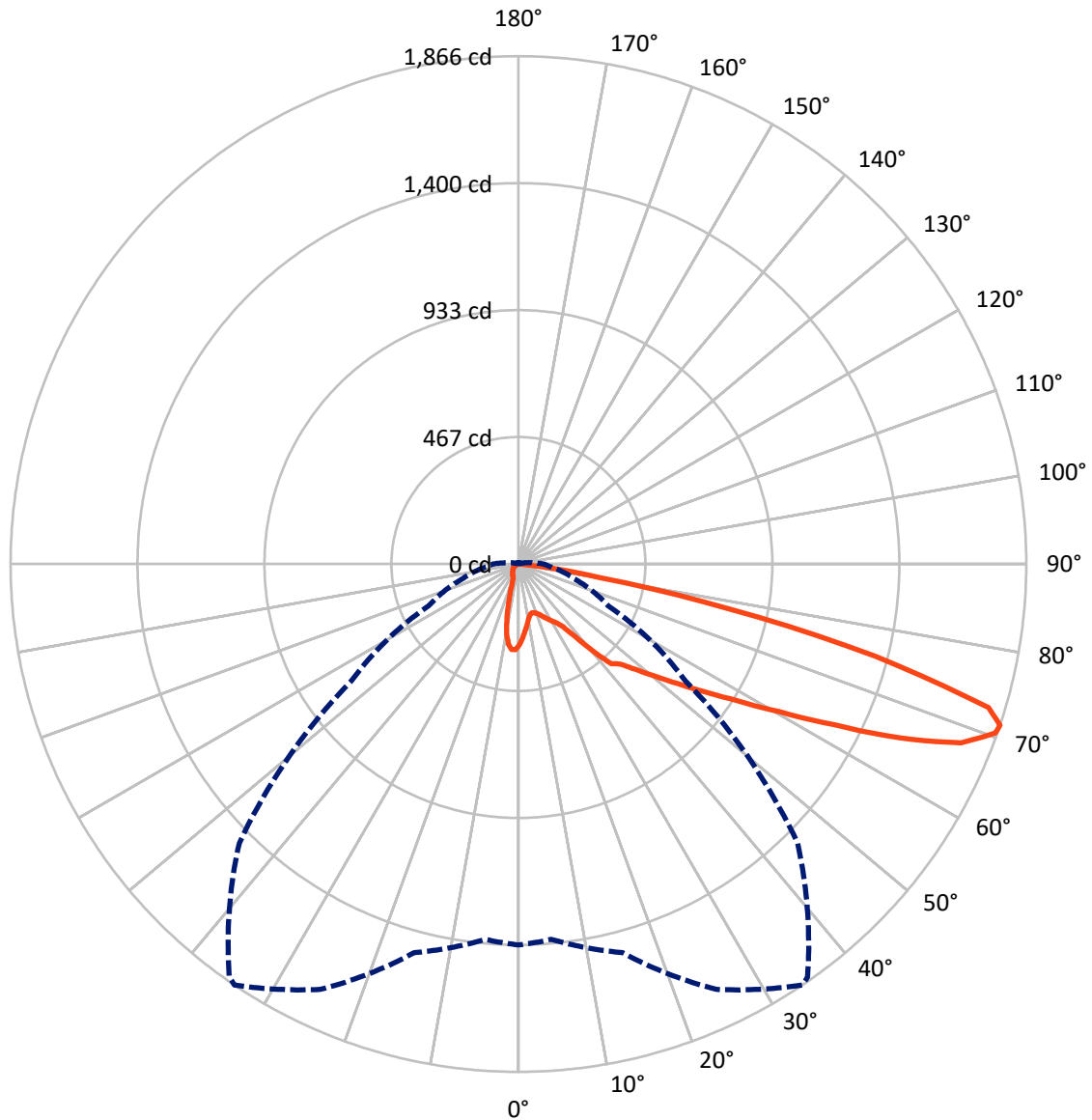
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 34-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	213.3	0.0	213.3
	% Fixture	11.1	0.0	11.1
Street Side	Lumens	1715.7	0.0	1715.7
	% Fixture	88.9	0.0	88.9
Total	Lumens	1929.0	0.0	1929.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.3	1.4
10°-20°	60.4	3.1
20°-30°	90.1	4.7
30°-40°	150.5	7.8
40°-50°	271.8	14.1
50°-60°	431.3	22.4
60°-70°	579.6	30.0
70°-80°	307.5	15.9
80°-90°	11.3	0.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1929.0	100.0
0°-180°	1929.0	100.0



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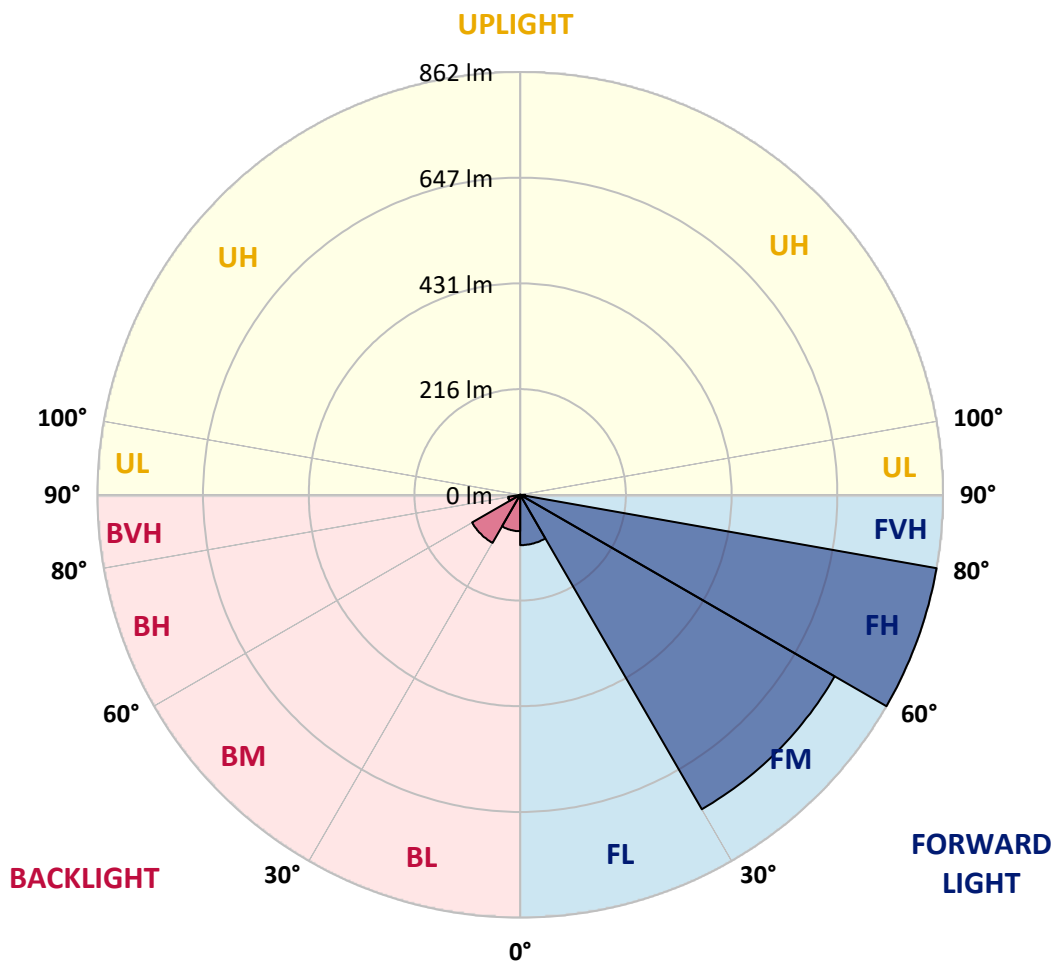
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	102.7	5.3			
FM	(30°-60°)	740.5	38.4			
FH	(60°-80°)	862.2	44.7			G1/1800
FVH	(80°-90°)	10.3	0.5			G1/100
BL	(0°-30°)	74.2	3.8	B0/110		
BM	(30°-60°)	113.2	5.9	B0/220		
BH	(60°-80°)	24.9	1.3	B0/110		G0/110
BVH	(80°-90°)	1.0	0.1			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9
2.5°	272.2	268.7	271.8	273.3	274.5	276.0	278.4	282.6	287.3	292.7	295.8
5°	237.3	239.3	240.4	244.7	248.9	249.7	257.1	265.6	276.4	287.3	296.6
7.5°	209.1	209.1	212.6	219.1	226.1	226.9	239.7	250.9	266.4	283.0	298.1
10°	186.6	187.4	190.1	196.7	205.6	207.5	221.8	237.3	256.7	278.4	299.7
12.5°	179.3	178.9	178.5	183.1	190.5	192.4	208.3	226.9	249.7	276.0	303.5
15°	183.9	182.7	180.0	180.8	185.5	187.4	201.3	219.9	245.5	275.7	310.1
17.5°	191.3	189.7	184.7	183.1	188.2	190.1	201.7	218.0	243.9	277.6	317.9
20°	200.2	198.6	190.9	188.9	194.0	195.5	207.5	221.5	244.7	281.5	328.3
22.5°	212.9	211.0	199.8	197.5	202.5	204.0	216.8	229.6	249.3	288.4	342.6
25°	228.4	226.1	211.8	208.7	214.9	216.4	229.2	241.2	257.1	297.7	360.8
27.5°	245.5	242.7	227.7	221.5	228.4	230.7	242.7	255.9	268.3	309.3	384.8
30°	260.9	257.8	243.1	236.2	243.1	244.3	258.6	273.3	286.5	329.1	420.1
32.5°	303.9	296.2	273.3	253.2	257.8	260.2	277.6	300.8	320.6	352.7	465.4
35°	368.2	362.0	334.1	299.3	283.0	283.8	306.2	335.7	344.6	380.2	521.5
37.5°	430.1	424.7	400.3	368.2	337.2	338.4	342.3	370.5	381.0	427.8	590.0
40°	497.9	489.4	470.0	439.4	418.1	413.1	394.1	413.9	436.7	487.8	664.8
42.5°	529.2	521.1	501.0	502.9	500.6	491.7	454.1	481.6	507.2	574.9	747.2
45°	581.1	565.3	523.8	526.9	523.8	524.6	533.9	573.8	595.8	667.1	840.5
47.5°	629.1	610.9	567.6	564.5	578.0	585.0	634.9	683.3	685.3	747.2	913.7
50°	672.9	659.7	619.8	620.2	645.0	652.8	752.6	796.8	757.7	808.8	971.0
52.5°	731.0	712.4	676.8	689.5	728.2	735.2	870.0	896.3	809.9	864.5	1015.9
55°	784.8	774.7	748.4	767.4	826.6	844.8	989.2	972.9	846.7	914.1	1037.6
57.5°	873.0	863.4	856.4	866.1	945.4	968.3	1110.0	1027.1	875.4	947.0	1027.5
60°	1020.2	1010.5	989.6	998.5	1101.9	1113.5	1204.8	1082.1	886.6	956.3	988.0
62.5°	1201.7	1189.7	1156.1	1197.1	1300.9	1300.5	1303.2	1111.2	872.3	928.8	883.9
65°	1365.5	1348.9	1331.4	1415.1	1541.3	1523.9	1407.7	1114.6	827.0	796.0	683.7
67.5°	1484.8	1478.2	1487.9	1618.3	1754.2	1736.8	1509.2	1066.6	688.4	574.5	422.4
70°	1480.1	1466.6	1528.1	1736.4	1859.9	1845.6	1504.9	876.5	459.2	304.3	176.9
71°	1400.0	1384.5	1478.2	1724.8	1866.1	1852.6	1450.7	749.9	363.2	214.9	116.5
72.5°	1081.7	1128.6	1277.6	1600.5	1806.5	1789.1	1303.2	574.2	230.0	124.3	58.5
75°	457.6	483.2	758.4	1142.5	1355.1	1346.2	878.5	265.2	105.7	56.1	22.5
77.5°	117.7	116.1	232.3	490.1	789.0	803.0	405.0	91.0	55.0	39.9	12.8
80°	22.8	24.8	66.2	170.4	301.2	309.3	132.0	39.9	36.8	31.4	6.6
82.5°	2.3	2.7	11.6	52.7	101.0	97.6	29.0	15.1	22.5	21.3	3.1
85°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	1.5	5.4	5.8	0.8
87.5°	0.0	0.0	0.4	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9	298.9
2.5°	298.1	301.6	305.5	308.2	310.9	311.3	315.1	314.4	315.5	315.9	315.5
5°	301.6	306.2	313.6	317.5	319.0	316.3	315.5	311.3	309.7	307.8	305.9
7.5°	305.5	311.3	319.8	321.7	316.3	306.2	298.1	287.7	278.0	271.8	272.6
10°	309.7	317.1	324.1	319.0	305.1	285.3	262.5	239.3	218.7	211.0	213.7
12.5°	315.1	324.1	327.2	313.2	286.1	246.2	204.8	169.6	148.3	135.5	134.0
15°	323.3	332.2	328.7	303.9	255.9	193.6	142.1	106.5	85.9	79.4	75.9
17.5°	333.3	341.9	328.7	287.3	212.9	138.6	86.3	64.7	58.1	56.5	56.9
20°	345.7	353.9	327.2	262.1	164.2	85.2	57.7	53.4	53.4	53.4	53.0
22.5°	362.4	366.6	324.8	228.8	113.1	57.7	51.1	50.7	51.1	51.1	51.1
25°	382.5	381.7	320.6	188.9	71.2	49.2	48.8	48.8	49.2	49.6	49.6
27.5°	409.2	401.1	313.2	141.3	50.3	45.7	46.5	47.2	48.0	48.8	48.8
30°	446.4	426.7	301.2	95.6	42.6	42.2	43.7	46.1	47.2	48.0	48.0
32.5°	486.3	453.0	280.7	61.2	39.1	38.7	40.3	43.7	46.8	47.6	47.6
35°	536.6	481.2	250.1	44.1	36.8	36.0	37.6	40.7	45.3	47.6	47.6
37.5°	589.6	511.4	205.6	37.2	34.5	33.7	34.8	37.2	42.6	46.8	47.2
40°	646.2	538.2	154.5	34.5	32.1	31.7	32.1	34.5	38.7	44.5	45.7
42.5°	703.1	560.6	108.0	31.7	30.2	29.4	30.2	31.7	35.6	40.7	41.4
45°	765.8	585.4	72.0	29.4	28.6	27.9	28.6	29.8	32.5	35.2	35.6
47.5°	811.5	594.3	49.6	26.7	26.3	26.7	27.1	27.9	29.4	29.8	29.4
50°	841.7	589.6	35.6	24.0	24.4	25.6	25.6	25.9	25.9	24.8	24.4
52.5°	863.8	572.6	27.5	20.5	22.8	24.0	24.0	23.2	22.5	20.9	20.5
55°	866.1	534.3	21.7	17.8	20.5	22.5	22.1	20.5	19.0	17.4	17.4
57.5°	836.7	476.2	17.8	15.1	17.8	19.7	19.0	17.4	15.5	14.3	14.3
60°	789.0	416.6	15.1	12.8	14.7	16.6	15.5	14.3	12.4	11.2	11.2
62.5°	701.1	357.7	12.4	10.5	12.0	13.2	12.8	11.6	9.7	8.9	8.5
65°	537.4	272.2	9.3	8.1	9.3	10.8	10.1	8.9	7.7	6.6	6.2
67.5°	322.9	163.8	7.4	6.2	7.4	8.5	7.7	6.6	5.4	4.6	4.6
70°	136.7	70.1	5.8	4.6	5.4	6.6	6.2	5.4	4.3	3.9	3.9
71°	92.9	49.9	5.0	4.3	5.0	6.2	5.8	5.0	4.3	3.9	3.9
72.5°	47.6	25.6	4.3	3.5	4.6	5.4	5.4	4.6	3.9	3.9	3.9
75°	17.0	10.8	3.5	3.1	3.9	3.9	4.3	4.3	4.3	4.3	3.9
77.5°	9.7	6.6	3.1	3.1	3.1	3.5	4.3	4.6	5.0	5.0	4.6
80°	5.4	3.5	1.9	2.3	3.1	3.5	4.3	4.6	5.4	5.4	5.0
82.5°	2.7	1.2	0.4	1.2	1.9	3.1	3.5	3.9	4.6	4.3	4.3
85°	0.4	0.0	0.0	0.4	1.2	1.5	2.3	3.1	3.9	3.9	3.5
87.5°	0.0	0.0	0.0	0.0	0.4	0.8	1.2	1.9	2.7	3.1	2.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)